There is provided cyclic amidine compounds of the following formula (I):

$$A^{1} = N \qquad (I)$$

wherein:

5

10

15

 ${ t A}^1$ and ${ t A}^2$ are hydrogen atom, optionally substituted alkyl group; optionally substituted aryl group; or optionally substituted heterocyclic group; and

X is $-C(R^1,R^2)-C(R^3,R^4)-$, $-C(R^5)=C(R^6)-$, $-C(R^7,R^8)-C(R^9,R^{10}) C(R^{11},R^{12})-$, or $-C(R^{13},R^{14})-C(R^{15},R^{16})-$ NH- (wherein, R^1 , R^2 , R^3 , R^4 , R^5 , R^6 , R^7 , R^8 , R^9 , R^{10} , R^{11} , R^{12} , R^{13} , R^{14} , R^{15} and R^{16} are hydrogen atom; halogen atom; optionally substituted alkyl group; optionally substituted aryl group; or optionally substituted heterocyclic group;

or pharmaceutically acceptable salts thereof.

These compounds have good affinity for $\alpha 4\beta 2$ nicotinic acetylcholine receptors and activate the same to thereby exert a preventive or therapeutic effect on cerebral dysfunction.

20